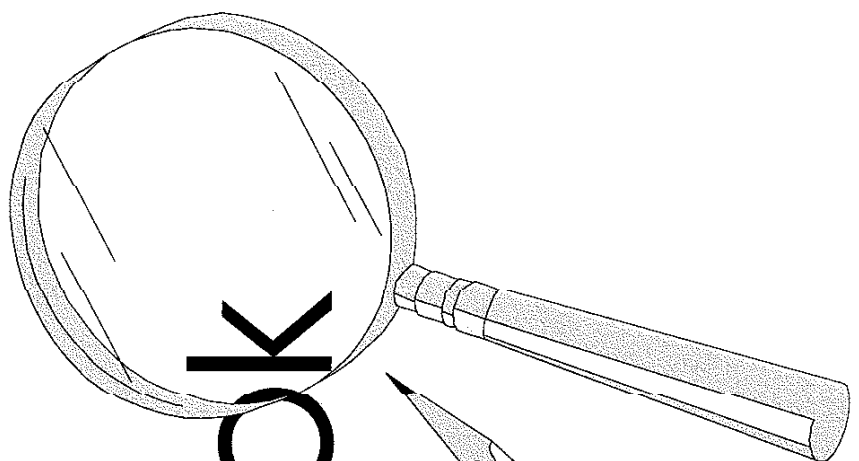


ITGS 2003-2004



# Log Book

(3) \*

## Att: Analysing the Problem

Experiment:- Determine the formula of the copper (II) 1,2-diamine complex by calorimetry.

- A detailed

Brochure made

using word

processor - helps

as a guide to

this experiment.

Various IT approaches to address the solution to the Problem.

1- A Digital video

Highlighting the

important steps of the

experiment - and delivering

a lecture on this topic of syllabus.

- A website

giving an interactive

presentation on internet and

Interactive Multimedia Presentation - available

on CD-ROM to the students.

Problem:-

- students can't get accurate results.

- The equipment needs very careful handling for accuracy.

- Difficult to understand the ligand formation.

- Using light transmission to get the right concentration.

→ OR a simple word document explaining all the steps and theory of the experiment.

Date: 8.4.03

## Feasibility study.

The product (IT solution) can be manufactured using 2 possible approaches, such as:-

### → MULTIMEDIA PRESENTATION:-

#### ADVANTAGES

- Interactive - attracts user attention & interest.
- Allows combination of <sup>clips</sup> text, video, images & sound files all at same time.
- Topics can be chosen from the navigation pane, thus the user views the presentation on his pace

#### VIDEO (DIGITAL)

#### ADVANTAGES

- Long lasting impact on user.
- User consistency of info provided.
- Sequence of events & movement.
- Attracts & keeps people attentive.

#### DISADVANTAGES

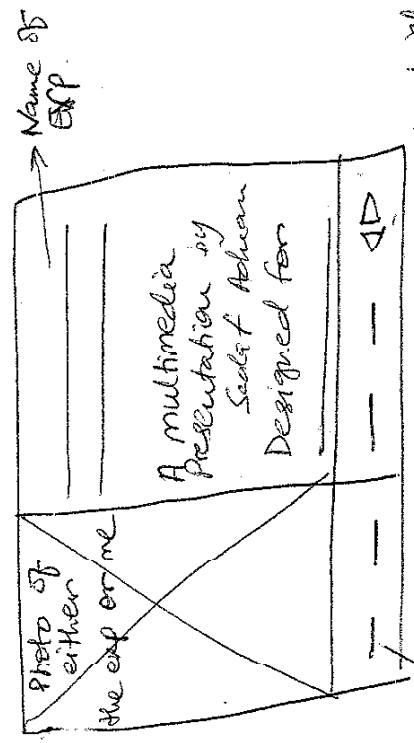
- Takes huge space on computer.
- Requires a good quality computer projectors, which are expensive.
- The problems with portability - requires complex setup of cables.

#### DISADVANTAGES

- Requires high technical skills for production.
- Doesn't allow user to interact with the video.
- Continuously played video is sometimes boring for user.

21/11/03

# Contents for the Main Page on Front page



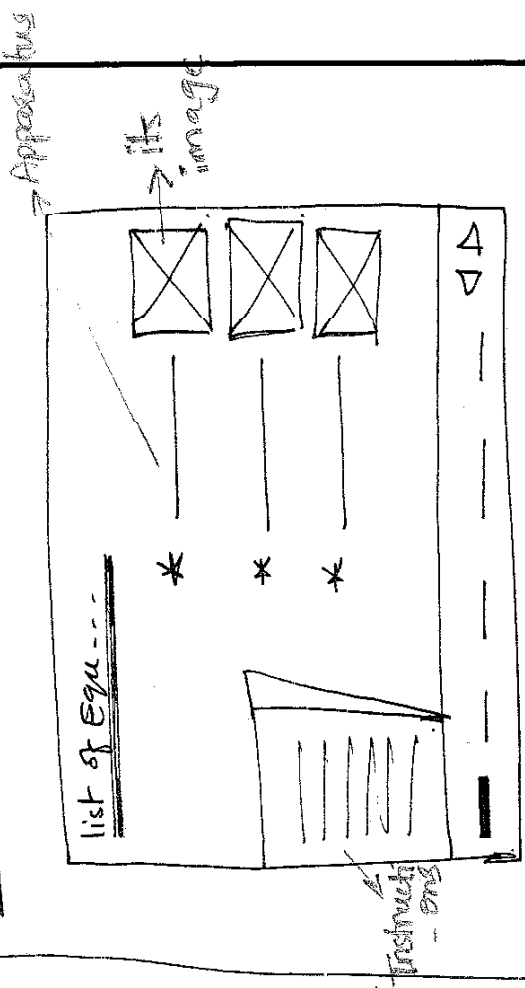
links to other pages

Must include following:-

- Page 1 - list of equipment for Exp (with pics)
- Page 2 - Preliminary measures (does & don'ts of Exp)
- Page 3 - Chemistry background of Exp (theoretical description)
- Page 4 - Procedure of the Experiment in steps
- Page 5 - Visual clip of Experiment
  - Video
  - Animated / still graphs.
- Page 6 - Keywords or Formulas required for the exp

Date: 20-10-03

## PAGE 1 LIST OF EQUIPMENT



For Calorimeter a little bit of detail (not on the page but with a link)

32)

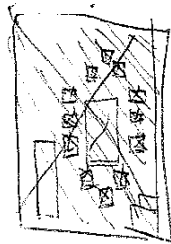
the

following

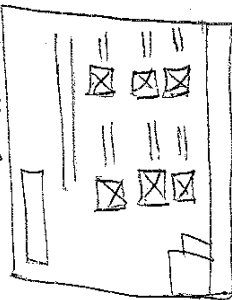
|   |
|---|
| <p><b>Main page</b></p> <ul style="list-style-type: none"> <li>Identifies the user</li> <li>Name of the experiment</li> <li>Determine the formula of the copper (II) 1,2-diaminoethane complex by Colorimeter.</li> <li>An image about the experiment</li> </ul>  |
| <p><b>List of Experiment</b></p> <ul style="list-style-type: none"> <li>Image of all the equipments along the names           <ul style="list-style-type: none"> <li>Colorimeter</li> <li>Volumetric flask</li> <li>2 Birettes</li> <li>Beaker</li> <li>Funnels</li> <li>Measuring cylinders</li> </ul> </li> <li>Brief details of the colorimeter</li> </ul> |
| <p><b>Procedure</b></p> <p>Procedure of the experiment in steps</p>   |
| <p><b>Visual clip of the experiment</b></p> <ul style="list-style-type: none"> <li>Includes a video clip of the experiment</li> <li>Include an animation of the graph on the right corner moving accordingly with the video</li> <li>As the video finishes the whole graph should come on the screen.</li> </ul>  |
| <p><b>Chemistry knowledge</b></p> <ul style="list-style-type: none"> <li>What are ligands?</li> <li>How they are formed and how the 1,2-diaminoethane ligands are attached to the <math>Cu^{+2}</math> ions.</li> <li>What causes the change in colour of the solution (containing 1,2-diaminoethane and <math>CuSO_4</math>)</li> </ul>                      |
| <p><b>Does and don'ts</b></p> <ul style="list-style-type: none"> <li>Positioning of the colorimeter</li> <li>Fixed mark on the projector</li> <li>Include pictures of right and wrong</li> </ul>  |
| <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>Safety instructions regarding experiment           <ul style="list-style-type: none"> <li>Wearing goggles</li> <li>Lab coats</li> </ul> </li> </ul>   |

Now & Before the Design cycle looked like

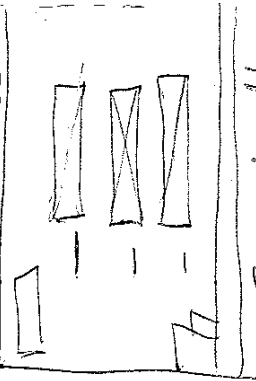
Main page.



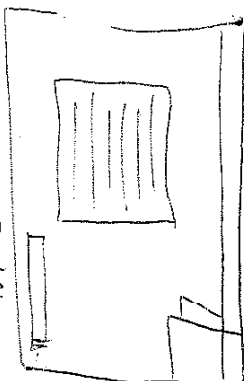
Equipment



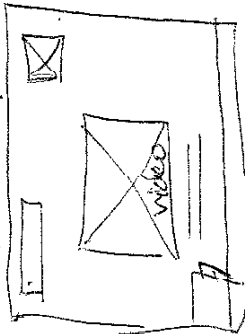
Procedure



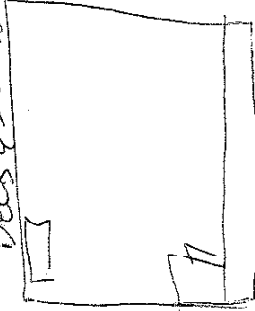
Theoretical know



Visual clip



Does & Don'ts

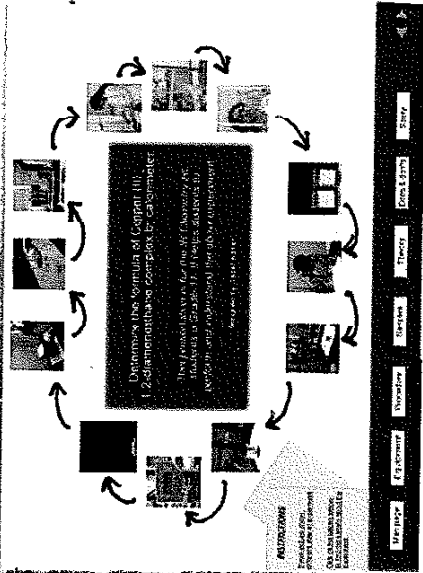


Safety



21-11-02

Took snapshots of the modified design of product.

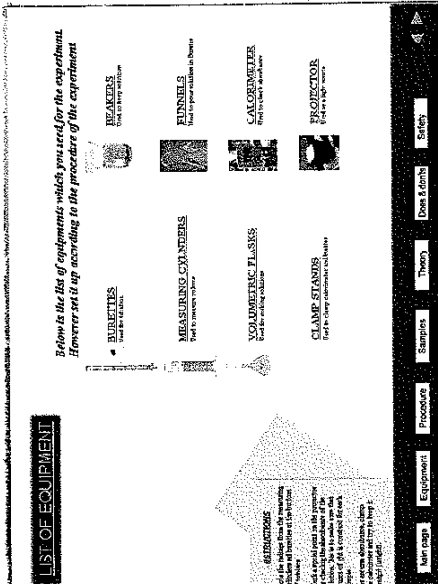


MAIN PAGE

Identifies the users, the experiment and the producer / designer of the product

# NEW/MODIFIED DESIGN OF THE MAIN PAGE, LISTS OF EQUIPMENT & PROCEDURE

The page showed all the steps of the experiment through images and so shows a cycle of steps, the user needs to do.



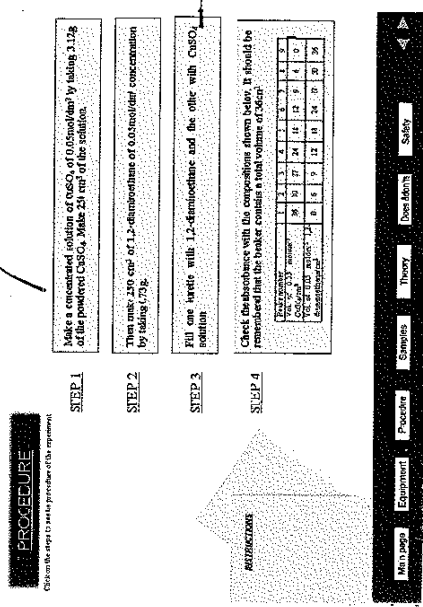
LIST OF EQUIPMENT

Shows more equipments in the page and give a link to them.

Instruction page guides how to take care about a certain equipment while collecting the data

All pages had buttons on the navigation bar in order to show the link properly. The instruction page, the navigation bars and the heading bars were made more aesthetic, using fire works.

As the user click on STEP 1 OR STEP 2 ..., the hotspot shows the text which is basically the first step of the procedure



PROCEDURE

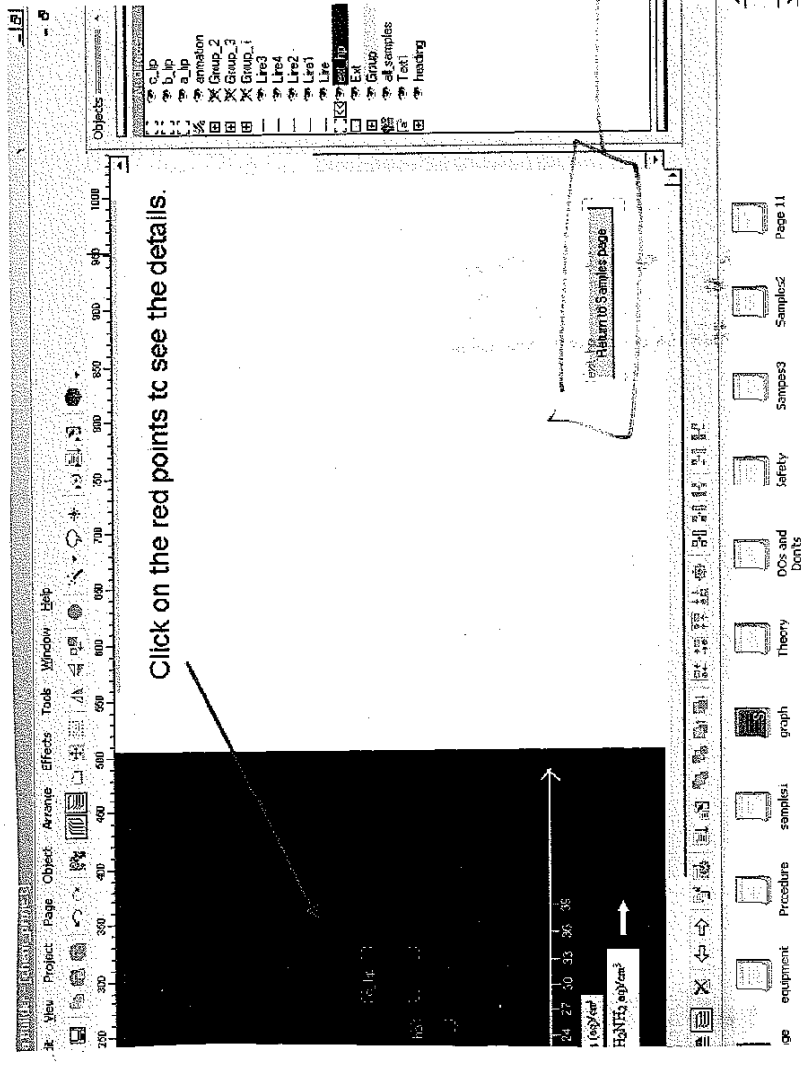
here the text was put as a bmp image. The reason was, MMS doesn't allow the same formatting of text as MS Word.

Date: 25-11-03

ITGS Project 2002-2004

65

A Refinement suggested by Matthias Begmann.  
 an expert in making  
 multimedia presentations  
 and has also studied  
 chemistry at the  
 university level which  
 enabled him to comment  
 on the content.



Initially the button  
 was called as "Exit".  
 But it was changed to "Return to  
 Samples page" because "Exit" button on  
 the page confused the ~~tester~~ presenter with exiting the  
 whole presentation.

Date: 2-3-04

3/3/2004

IGS Project 2002-2004